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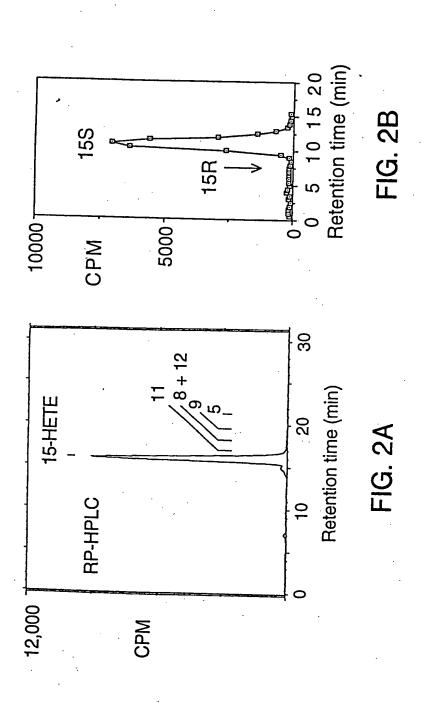
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н	MAEFRVRVSTGEAFGAGTWDKVSVSIVGTRGESPPLPLDNLGKEFTAGAEEDFQVTLPEDVGRVLLLRVHKAPPVLPLLGPLAP new 15S-LO	
ਜ	MGLYRIRVSTGASLYAGSNNQVQLMLVGQHGEAALGKRLWPARGKETELKVEVPEYLGPLLFVKLRKRHLLKD 15S-LO	
85	DAWFCRWFQL-TPPRGGHLLFPCYQWLEGAGTLVLQEGTAKVSWADHHPVLQQQRQEELQARQEMYQWKAYNPGWPHCLDEKTVED new 15S-LO	
74	DAWFCHWISVQGPGAGDEVRFPCYRWVEGNGVLSLPEGTGRTVGEDPQGLFQKHREEELEERRKLYRWGNWKDGLILMMAGAKLYD 15S-LO	
170	LEINIKYSTAKNANFYLQAGSAFAEMKIKGLLDRKGLWRSINEMKRIFNFRRTPAAEHAFEHWQEDAFFASQFINGLNPVLIRRCH new 15S-LO	
160	I I I I I I I I I I I I I I I I I I I	•
256	YLPKOFPVTDAMVASILGPGTSLQAELEKGSLFLVDHGILSGIQTNVINGKPQFSAAPMTLLYQSPGCGPLLPLAIQLSQTPGP new 15S-LO	
246	HLPARLVFPRGM-EELQAQLEKELEGGTLFEADFSLLDGIKANVILCSQQHLAAPLVMLKLQPD-GKLLPMVIQLQLPRTGSP 15S-LO	
340	NSPÍFÍPYDDKKND <u>MILAK</u> TWVRNÁBFSFHBÁDTHILHSHILPEVFTLATURQLPHCHPLFKLLIPHTRYTLHINTLARELLIVPGQ new 15S-LO	
327	PPPLFLPTDPPMA <u>WILAK</u> CWVRSSDFQLHELQSHLLRGHIMAEVIVVATWRCLPSIHPIFKLIIPHLRYTLEINVRARTGLVSDMG 15S-LO	
426	VVDRSTGIGIEGFSELIQRNMKQLNYSLLCLPEDIRTRGVEDIPGYYYRDDGMQIWGAVERFVSEIIGIYYPSDESVQDDR <u>ELOAM</u> new 15S-LO	
413	IFDQIMSTGGGGHVQLLKQAGAFLTYSSFCPPDDLADRGLLGVKSSFYAQDALRLWEIIYRYVEGIVSLHYKTDVAVKDDP <u>ELOTW</u> 15S-LO	
512	VREIFSKGFINQESSGIPSSLETREALVQYVTMVIFTCSAKHAAVSÅGOFDSCAMMPNLPPSMQLPPPTSKGLATCEGFIATLPPV new 15S-LO	
499	CREITEIGLQGAQDRGFPVSLQARDQVCHFVIMCIFTCTGQHASVHL <u>GQLDM</u> YSWVPNAPCTMRLPPPTTKD-ATLETVMATLPNF 15S-LO	
298	NATCDVILALMILSKEPGDQRPLGTYPDEHFTEEAPRSIATFQSRLAQISRGIQERNRGLVLPYTYLDPPLIENSVSI 676 new 15S-LO	
584	HQASLQMSITWQLGRRQPVMVAVGQHEEEYFSGPEPKAVLKGFREELAALDKEIEIRNAKLDMPYEYLRPSVVENSVAL 662 15S-LO	
	new 15S-LO=15-Lox-2=(SEQ ID NO:2) 15S-LO=15-Lox-1=(SEQ ID NO:25)	



Title: Lipoxygenase Proteins and Nucleic Acids

Inventor: Brash et al.

Attorney Docket: 1242/5/2/2 DIV

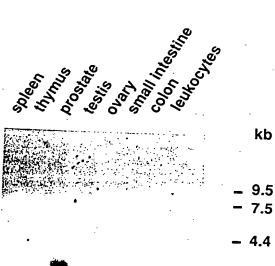


FIG. 3A

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- 2.4

- 1.4

4.4

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Nucleic Acids

Inventor: Brash et al. Attorney Docket: 1242/5/2/2 DIV

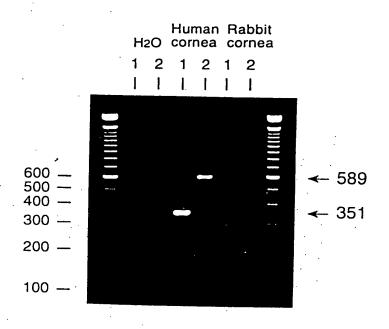


FIG. 4A

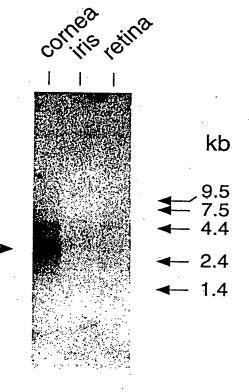


FIG. 4B

CAGTAGAGAGCTAAACTGGTCAGGAGG

STGGGAACCCAC 90	Н	7	w r						
NCGGGGGAAGCCTGTGGGCACAAAGAGTGTCTGTCAGCATCGTGGGAACCCA	CATCTGGGCAAGGAGTTCAGCGCCGGTGCTGAAGAACTTCGAGGTGACGCTTCCCCAGGAC H L G K E F S A G A E E D F E V T 1 P O D	ACAAAGCACCCCGGAAGIGICCCICCCGCITAIGICITTICCGTICTGAIGCCIGGI H K A P P E V S L, P I, M S F R S A M	GAALHFPCYQUETY ON LEGAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	AGAAGGAGCTTGAGTCCAGGC	CTCGCTGCCTTGACGACTGTGAAAGACTTGGACCTCAACATCAAGTACTCTGCGATG	ACTCCGCGTATACGGAGCTGAAAGTCAAAGGGCTCCTGGACCGCACAGGACTCTGGAGGA	DGCAAGACTCCAGCAGCAGTATGTGTTTGCACACTGGCAGGAAGATGCCTTCT R K T P A A E Y V F A H W O E D A F	STCCTGATTCGCCGCTGTCACAACAACAACTTCCCGGTCACTGATGAAATGGTGGC	AGGCTGAGTTGGAGAAGGGCTCCCTGTTCTTTGGTGGATCATGGCATTCTTTCT
TGGGCTGGCACATGGC G A G T W	STTCAGCGCCGGTGCTG	GGAAGTGTCCCTCCCGC	STTCCCCTGTTATCAGT	CTGCAGGATCAGCGCC	CACGAGACTGTGAAAG	GAGCTGAAAGTCAAAGG	GCAGCAGAGTATGTGT A A E Y V E	TGTCACAGTCTCCCAAA	AAGGCTCCCTGTTCTT K G S L F I
GTATCCACGGGGAAGCCTG VSTGEAC	CTGGACCATCTGGGCAAGGA L D H L G K E	CGAGTCCACAAAGCACCCCC RVHKAPPP	CTACCTGGGGCTGCACTCCA(rggcaagaccarcacccracy W Q D H H P T	SETTGCCTCGCTGCCTTGAC	AAGCCCACTCCGCGTATACC K A H S A Y T	TTAACTTCCGCAAGACTCCA F N F R K T P	ACCCGGTCCTGATTCGCCGC N P V L I R R	GTCTGCAGGCTGAGTTGGAG S L Q A E L E
ATGGCGAAATGCAGGGTGAGATATCCACGGGGAAGCCTGTGGGGCTGGCACATGGGACAAAGTGTCTGTC	GGAGAGGCCCCTTAGTACCTCTGGACG ESPIN	GTAGGCACTGTGCTGATGCTGCGAAGCACCCCGGAAGTGTCCCTCCC	CGCTGGTTCGAGCTGGCTACCTGGGCTGCACTCCCCTGTTATCAGTGGCTGGAAGGGGGGGG	GAGGGAGCAGCAAAGGTGTCCTGGCAAGACCATCACCCTACACTGCAGGATCAGCGCCCAGAAGGAGCTTGAGTCCAGGCAGAAGATGTAC E G A A K V S W Q D H H P T L Q D O R O K E L E S R O K M V	AGCTGGAAGACTTACATTGAAGGTTGGCCTCGCTGCCTTGACACGAGACTTGGAAGACTTGGACTCAACATCAAGTACTCTGCGATG S W K T Y I E G W P R C L D H E T V K D L D L N T K V S A M	AAGAATGCCAAACTCTTTAAAGCCCACTCGGTATACGGAGCTGAAAGTCAAAGGGCTCCTGGACCGCACAGGACTCTGGAGGAGT K N A K L F F K A H S A Y T E L K V K G L L D R T G I, W R S	CTGAGGGAGATGAGAAGGCTGTTTAACTTCCGCAAGACTCCAGCAGGAGTATGTGTTTGCACACGGAGGAAGATGCCTTCTTCGCC	TCCCAGTTCCTAAATGGCATCAACCCGGTCCTGATTCGCCGCTGTCACAGTCCCAAACAACATCCCGGTCACTGATGAAATGGTGGCCC S Q F L N G I N P V L I R R C H S L P N N F P V T D E M V A	CCAGTGCTGGGCCCTTGGAGGCTTGGAGAAGGGCTCCCTGTTCTTGGTGGATCATGGCATTCTTTCT

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360 1170 390 1260 1350 1440 420 450 480 510 540 1530 1620 1710 **ACCAACATCCTCAATGGAAAGCCTCAGTTCTCTGCAGCCCCGATGACCCTGTTACACCAAGAGCTCAGGGTCCGGACCCCTGCTTCCCATT** CTGCCCAGCGATGACACGTGGGACTGGTTGCTGGCCAAGACCTGG **TACATCCATGAGGCTGTCACACATCTGCTGCATGCCCATCTGATTCCAGAAGTCTTTGCCTTGGCCACATTA** CGTCAGCTGCCTAGGTGTCACCCTCTTCAAGCTATTGATTCCTCACATTCGGTACACTGCACATCAACACGCTTGCCCCGGGAGCTG ATCTGGGGGGAATAAAGAGCTTTGTCTCTGAAATAGTCAGCATCTACTATCCAAGTGACACATCCGTCCAAGATGACCAAGAGGCTCCAG 3 GTTCAGGCCAGTTCGACTCTTGTGTTTTGGATGCCCAAT GAGAGITITCATAGCCACGCTCCCAGCAGITAAITICG O Ø Z S Ø \mathbf{z} Ц Z Ы M ĸ 国 ш **3GGGGATTCTCTGACCTGATAAAGAGAAACATG** Ы Ø K Ξ Ω Ы Z 跘 G Ω ſι H ĸ E C S 3 > z × Ø Д ഗ Ö Д 闰 Н ы Ø **AACTACTCTGTCTGTGTCTCCCTGAAGATATCCGAGCCCGAGGTGTGGAAGAAGACATCCCAGGCTACT** Ø 3 Д 耳 Ы ß ß ۲ Н Н Д Ö H S 0 Ø Ω Ä H ß Q Д O S 耳 Р H ≻ Œ, ß Σ Н S 回 Н ß ø ĸ G Д ρι Ö S Н p, H н ტ 回 Ø CTCGTTGCCCCTGGGAAGTTGATAGACAAGTCCACAGGCCTTGGCACT H ы 出 E > ഗ A, K Z ш Н Д G Ö Н 回 K Ø Д 出 Н П pz; Ø K H G 4 Д Ħ Ы Ö ď Ö × × Ø z > Ы E K 白 A, S ß Z, × ß [I4 Н 闰 Ø Д Ŀ 闰 × Д S G O Ø Ç I Н Д ഠ > 闰 E٩ Д н Д н Д ſι ß Į, Ω. × ы I Ы H ß ſι Н Ö Q ſτι Ö × Ö × > Н GTTCGCAATTCTGAG Z 国 ĸ Ö ы 回 × \mathbf{z} Н Ŋ Д > æ K Ħ Н Ø Z Ч 4 ഗ Ö Н D, Z ĸ Ø > 3 3 ⊱ Д > ĸ Ы Z Q

FIG. 5B

CAGATGAACACTTCACA 1890 PDEHFT 630 SGAACCGAGGCCTGGCA 1980 NRGLA 660	TTCTCCTGGACAACCAAGCCCCA ATCTCCACAGCAGAGAGCCATC CCATGGACGGTAACAGAAACAC IATCAGGAACACAGGAATTTGTC IACTGGAACTCAGGAATTTTGTC IACTGGAACTCTAACTCCAGAGA ATGTGTCATAATGGGATTCGATGC AAGAGAGAGGACATGCTAACTC AAGAGAGAGGACATCCTAATACC TGTTTTTTTTTT
TGCTAAGCGCAGAACCTGGGGCCCTGGGCCACTATCCAGATGAACACTTCA L L S A E P G D Q R P L G H Y P D E H F CCTTCCAGAGAAAGCTGATCCAGATCTCCAAGGGCATCAGGGAGGAACCGAGGCCTGG A F Q R K L I Q I S K G I R E R N R G L . TCATTGAGAACAGTGTCTCCATCTAA	TGACCATGCCTCTCCAGGCTAAGTCCCCGTATC AAACAGAAAAACTCCCACAGAAGGCAA CTTTGCTGGTTTGCTTTTGCTTTTCTATTCCATTA CTCACCTGACAAAGGCAGCTTTGAGAAGGGA CTCACACTTGCTTTTGCTTTTTTAAAAGGCA CTCACACTTCACAAAATTAATACTTTTTAAGAG ATCACATTCCCAGCAAATTATAATTTTTAAAAAAAAAA
TCAAGTTATCACATCATTGCTCTCTGGGCTGCTAAGCGCCAGAACCTGGGGCCACAAAGGCCCCTGGGCCACTATCCAGATGAACACTTCACA S S Y H I I A L W L L S A E P G D Q R P L G H Y P D E H F T GAGGATGCCCCCGGCGAAGCGTGGCTGCCTTCCAGAGAAAGCTGATCCAGATCTCCAAGGGCATCAGGGAAGGAA	CATCTTGGAGAAGACAGTCCTGTGTGACATATAGAAACTCTTTGACCATGCCTCTCCAGGCTAAGTCCCCGTATGCTTCTCTTGGACAAGCCCCAAGCCCCAAGCCCCCAAGCCCCCAAGCACACCAAGCCCCAAGCCCCCAAGCACACCAAGCCCCAAGCCCCCAAGCACACCAAGCCCCAAGCACACCAC

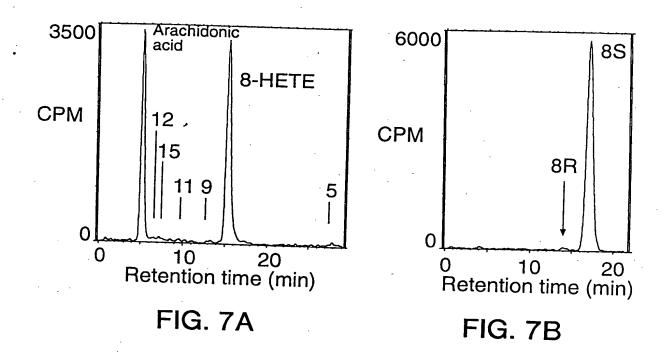
жо л -8	15-Lox-2		15-Lox-2	8-Lox	15-Lox-2	8-гох	15-Lox-2	8-гох	15-Lox-2	8-Lox	15-Lox-2	8-Lox	15-Lox-2	8-Lox	15-Lox-2
(1) MAKCRVRVSTGEACGAGTWDKVSVSIVGTHGESPLVPLDHLGKEFSAGAEDFEVTLPQDVGTVLMLRVHKAPPEVSLPLMSFRS		85 DAWFCRWFELEWLPGAALHFPCYQWLEGAGELVLREGAAKVSWQDHHPTLQDQRQKELESRQKNYSWKTYIEGWPRCLDHETVRD 85 DAWFCRWFQLTPPRGGHLLFPCYQWLEGAGTLVIOEGTAKVSWAPHTH	171 IDINITED SANGENY CONTROLL OF THE TOTAL O	170 LEINIKYSTAKNANLFFKAHSAYTELKVKGLIDRIGIMRSÍREMRRIFNFRKTPAAEYVFÁHWQEDAFFÁSQFINGINPÝLIRRC 170 LEINIKYSTAKNANFYLQAGSAFAEMKIKGLIDRKGIMPSIMEMPETEMEDEN.	(258) HST CAMPER MINE OF THE SOFTWALLING LINE IN THE S	•	(34) DNPIET DEDINGENEET 1	340 NSPIFLPTDDKNDWILAKTWVRNAEFSFHEALTHILHSHI.PEVFALATTRQLPRCHPLFKILIPHIRYTLHINTLARELLVAPG	(426) KI.IDK'SIDCI CACCILIAN LANDER LANDER LANDER CHPLETCHINE LANDER LAN	425 QUVDRSTGIEGFSELIQRNÆVELNYSULCLPEDIRARGVEDIÞGYYYRDDGMQÍMGAIKSFVSEIVSIYYPSDÍTSVQDDQELQ	(511) AMARETECEPE OFFICE OF THE STATES OF TH	510 AWKEIPSKGFINGESSGIPSSLEINEALVOYITMVIFTCSAKHAAVSSCOFDSCVMMPNLPPIMQLPPPISKGOARPESFIATL	(596) PAYINGCOULTHAN L. L. C.		/ / / / / / / / / / / / / / / / / / /

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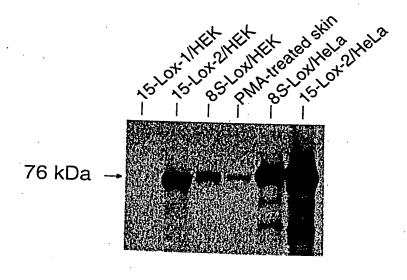
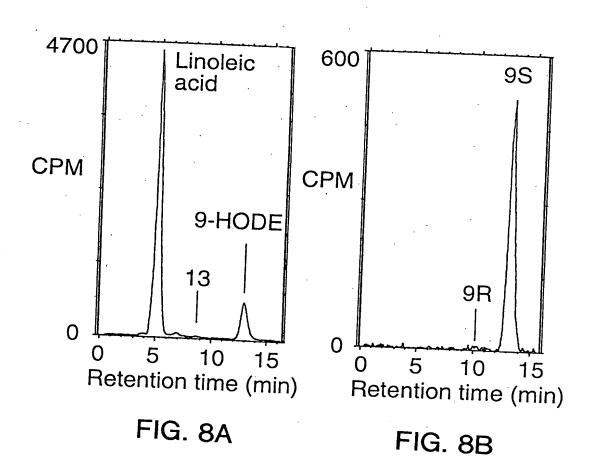


FIG. 7C

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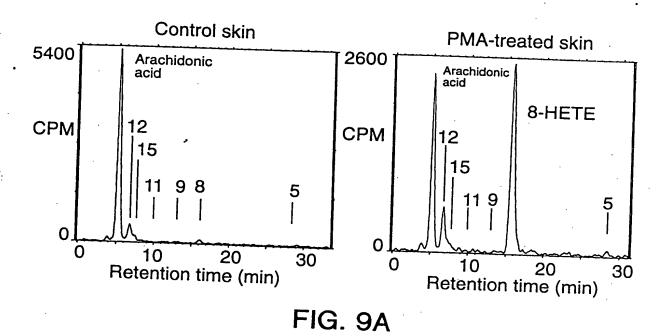


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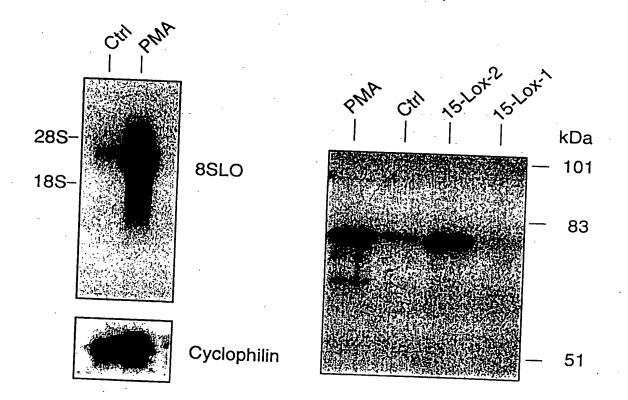


FIG. 9B

FIG. 9C

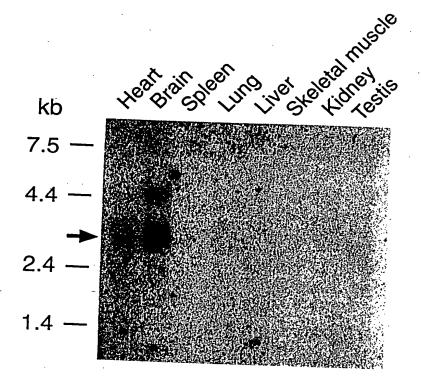


FIG. 10